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## Queering code/space: the co-production of socio-sexual codes and digital technologies

### Abstract

The mutual production of space by sexuality and technology has been differently addressed in the often-disparate disciplinary pursuits of queer geographies and critical studies of technology in geography. Building on Dodge and Kitchin's 'code/space,' we highlight how studies of technology in geography are already concerned with questions of sexuality through the examination of biopolitics and the regulation of bodies, together with the (re-)establishment of new and old lines between the public and the private. The immanence of sexuality in code/space foregrounds the importance of spatial processes characterized by their difference and normativity in the geographies of technology. Queer geographies critically examine such different experiences and processes of differentiation through space in their nuanced conceptualisations of spatial regulation and transgression. We illustrate how these two bodies of geographical scholarship might be synthesized by outlining three approaches for studies of 'queer code/space.' To show how there are a variety of relationships between sexuality, code, and space, we play on the double entendre of 'code' as a set of social rules and norms, and 'code' as the set of algorithmic instructions underlying software systems. In both senses, codes constrain forms of intimate life, but can also transgress, disrupt, and distribute the norm. To queer code/space is to emphasise the complexities of difference and normativity in living with technologies, where technologies might both proliferate and regulate socio-spatial experience.

**Keywords:** code/space, difference, intimacy, normativity, queer theory, sexuality, technology

### Introduction

*"Heteronormativity is a fundamental motor of social organization [...], a founding condition of the unequal and exploitative relations throughout even straight society. Any social theory that miscomprehends this participates in their reproduction"* (Berlant and Warner 1998, 564).

Though there has been much research in geography on code and sexuality as separate enterprises, only a limited amount of research explicitly theorizes software and sexuality together in a mutual production of space. Yet, as Berlant and Warner note above, there is a lot at stake in adequately understanding the role that heteronormativity plays in the reproduction of the social, that, as geographers have outlined well, is increasingly co-produced through digital and software systems. The risk of not taking questions of (sexual) difference and normativity seriously in the production of code/space (e.g., by treating users and populations as undifferentiated or as mere objects in a system of interactions) may inadvertently reify the status quo, or legitimate the exclusion or discrimination of particularly oriented bodies. Following Kitchin and Dodge (2011), 'code/space' is a concept that recognizes the proliferation of software and code that, in particular spaces, has resulted in a relationship of mutual dependency between code and the production of space. Strictly, code/spaces are spaces that could not function without their software systems. Here, we emphasize the complex relationships between software and space constituted by differing degrees of dependency, rather than straightforward mutuality. This illustrates that the connections between the social and digital coding of space, and the reproduction or resistance to normativity therein, is inconsistent,

hesitant, and non-deterministic. Nonetheless, technologies have a significant role to play in producing space through the biopolitical regulation (and transgression) of the dichotomies that structure places as hetero- and homosexual, public and private, and minority and universal (Foucault 1978). Contemporary technologies 'code' space through the algorithmic sorting of bodies, the augmentation of spatial experience with digital forms of representation online, and the transformation of everyday subjectivities through software and coded objects (Ash, Kitchin and Leszczynski 2016; Kitchin and Dodge 2011; Kinsley 2014).

This opens up the problematic of whether software coding results in a normalisation of space. Queer geographies and theory offer possibilities for unpacking the nuances of this relationship between writing, performing, and disrupting space through code. Queer approaches are invested in conceptualising and (therefore) challenging both social and digital code(s) - or the norm - to show how they constrain normativity but also how forms of intimate life can transgress, disrupt, and distribute what is normal. Queer geographies illustrate that there might be a variety of relationships between norms and space. Space can be 'coded' as, for example, gay or straight, but not without opportunities for these normative regulations to be transgressed. Yet such transgressions of sexually coded space are rarely straightforward diversifications, when queer acts might be performed through straight scripts, and sexual norms themselves have a turbulence that resists ossification through their evolution, dissolution, and recurrence. 'Queer code/space' thus emerges in the synthesis of two claims. First, the inter-relationship between sexuality and code/space is a distinctly spatial one characterised by processes of difference and normativity. Second, queer geographies critically examine such different experiences and processes of differentiation through a spatial politics of normative regulation and transgression. As synthesis we put forward 'queer code/space' to illustrate the simultaneous proliferation and regulation of social life through technologies.

Next we outline the former claim, showing that critical studies of technology in geography are caught up in the relations between space and normative sexuality. Then we set out the latter claim, illustrating how strands of queer geographical scholarship emphasise the complex relationships between norms and space. Finally, we provide the synthesis, outlining three broad approaches to normativity within queer theory that offer productive intersections for future research on the social and political life of code/space. First, we consider the regulatory characterization of sexuality in early queer theory that illustrates the complex production of space through discursive moves in which technologies write the body through social and digital code(s). Second, we examine the queer emphasis on performativity and the figure of the cyborg to explore the potentially transformative possibilities of acts of 'writing' space with machines. Finally, drawing on accounts of normative dissolution in recent anti-social queer theory,

we explore how promises of intimacy via coded channels for connection result in ambivalent and complicated senses of space.

### **Code/space and sexuality**

We suggest that there are productive intersections between critical studies of technology in geography and queer geographies. We argue not that the former has neglected questions of sexuality, but that this has not been their focus. This is a matter of emphasis, not omission. We build our discussion from Dodge and Kitchin's (2004; 2005) early theorisation of the relationship between technology and space. In their conceptualisation of the production of technologies through code/space we find an interrogation of the relationship between power and space that is also critical to queer geographies. Code/space is powerfully productive yet also ambivalent and banal, particularly when the focus switches to everyday experience and embodied processes. We address Dodge and Kitchin's spatial imaginary, before turning to some of the places of code/space that appear in their accounts, most notably the home and the airport. Though theorizations of code/space have expanded significantly since the mid-2000s to questions of big data (Burns 2014; Kitchin 2014; Wilson 2015), smart cities (Gabrys 2014), and algorithmic forms of policing and profiling (Amoore 2009; Kaufman 2016), we draw on these early theorizations for two main reasons.

First, we anticipate that readers will be more familiar with these initial and foundational theorizations than the numerous and complex developments since, and second, the elegance of the examples of the home and airport effectively captures the scope and scale of queer critique that, as we argue, implicates both the personal and global. Dodge and Kitchin (2005, 171-72) frame code/space as a relational approach to space that has synergies with but, they suggest, differs from Butler's (1990) now (queer) canonical theorisation of performativity. They argue that their approach emerges through a conceptualization of the relationship between software and space as ontogenetic in which code/spaces are continually brought into being through the productive power of technologies to 'make things happen' that they call *technicity*. This ongoing (re)production of space with technologies occurs via processes of *transduction* in which form is repeatedly given in ways that change the conditions under which that form is (re)made.

It is worth considering the extent to which this relational understanding of code/space differs from a sense of queer space that could appear through Butler's performativity of gender and sexuality. We might certainly find, as Dodge and Kitchin suggest, "nonhumans and objects" (p. 172) absent in Butler's theory and her account has been read by some as operating primarily through a linguistic or discursive (and by extension 'human') mode (Barad 1998). However, performativity does not have to be human *per se* (e.g. Barad 2003). Instead, performativity outlines a relationship between a (more or less material) thing and its conditions of presence: how is this thing continuously made to appear stable, and

how, through these processes of appearing, are its parameters of stability liable to (or restricted from) change? In this way, a performative understanding of space would seem very close to Dodge and Kitchin's (2005, 172) code/space that is "constantly being brought into being as an incomplete solution to a relational problem." If this broader framing of performativity holds, it raises the question of what is gained by thinking together the relational understandings of space that might go under the banners of 'code' and 'queer.' One answer could be an account of code/space that examines how tendencies towards the normative regulation of space are lived, reshaped, and resisted through changing forms of intimate life, understood as necessarily both public and private (Berlant 1998). This would expand upon Dodge and Kitchin's (2004, 209) suggestion that the operation and experience of code/space is embodied through "the performances and interactions of people within the space." So we might retain from Butler (1993) her emphasis on the body and how it comes to matter as a focal point for the spatial politics of the performativity of code for the productive regulations, transgressions, and failures of code/space. Such intimacies redirect attention to the (re)production of code/space through the changing parameters and senses of the body, and of embodied experiences of proximity.

This invites consideration of some of the places of code/space. The places used as examples by Dodge and Kitchin (2004; 2005), most notably the home and the airport, highlight how technology reifies and/or reorients existing relationships of and between intimacy, family, and nation. These are sites that can be geared towards the normative reproduction of the intimacies of domesticity, whether that *domus* is the family home or the nation-state. Thus, the places produced through code/space are embroiled in processes of socio-sexual reproduction that are central to queer critique. We first consider the home, then the airport to flesh out this point. In the home, which cannot be unproblematically conceptualized as a safe space, technology tends not to exact a spectacular reorganization toward an only anticipatory or algorithmic future (Dodge and Kitchin 2009). Instead and more commonly, technology occupies a relation of banality, a background, encountering heteronormative and other circumstances of cohabitation. Pointing to examples of coded objects, Dodge and Kitchin (2005, 174-75) illustrate how "everyday home life" is "augmented, mediated, and regulated" by, for example, a "digital alarm clock," a "programmable microwave," and a "prepaid electricity meter."

This picture of home life illustrates how software almost indiscernibly seeps into scenes of domestic intimacy. This can be extended through accounts that have focused on forms of atomisation of, and isolation in, the home through technologies, notably through work. Massey (1995) outlines how the working experiences of male software developers in Cambridge are co-constituted by emotional distance from their wives at home. When conceptualized as a site connected to, rather than distinct from work, the home can be understood as perpetually transduced into a workplace through mobile and other technologies, as a site of affection or withholding in sexual productions and gendered performativity

(Blumen 2012; Gregg 2011). The differential use of home appliances - most obviously, attention to mobile phones and videogames - produces varying degrees of engagement and distraction, closeness and distance, that take on gendered and sexualized coordinates (Turkle 2011). For example, examining internet gambling, Valentine and Hughes (2012) highlight how addiction online produces new spatial relations in the home that trouble (without eliminating) existing patterns of heteronormative domesticity. The home emerges as a place where it may be easier to maintain separation, but also where continuous connectivity connotes the permanent surveillance and quantification of activity, redrawing lines of privacy and publicity, and the forms of intimacy that typify the variety of domestic spaces.

Elsewhere, Dodge and Kitchin (2004, 205) frame the airport as a code/space that produces 'docile bodies,' and frame security and biopolitical management as "interlocking discourses that persuade and discipline passengers and workers." Others have built upon this to show how the airport can be understood as a site for the realisation of national biopolitics through processes of intimate state-making, associated with the regulation and comportment of prescribed and predictable bodily activity. Adey (2009, 275) emphasizes how the airport is a space where bodies are imagined as sexless or castrated in a necessary step toward their regulation, oversight, and control. These deeroticized, and thereby dehumanized, bodies are more easily enrolled into an anticipatory calculation of risk, implicating them in strategies of national security. Martin (2010, 29) too describes the policing and affective orientation of these bodies in the airport in terms of a governance of utterances in which the "linguistic performances of the securitized subject" - which is necessarily a knowable, a transparent, and in Adey's terms, an unsexed subject - are limited. In such readings, code/space produces the airport through forms of biopolitical regulation that limit the (un)sexed subject in their embodied micro-performances, and are instead forced to present a predictable and acceptable self to the arbitrary and highly discretionary interpretation and decision of both security officers and opaque digital algorithms.

Yet, whilst the "code law" (Dodge and Kitchin 2004, 199) of the airport does produce such "invasive transition zones" (p. 204), these are still negotiated and "experienced differently" (p. 205). The intensive regulation and associated (de)sexualisation of bodies in security zones of the airport punctuates an otherwise largely banal experience of code/space through "gossip, waiting, shopping, fidgeting, reading, staring, eating" (p. 204). Such spaces of leisure and consumption can contribute though to a wider national political imaginary that the airport inscribes on the body. Here, the airport is a particular "promise of happiness and security" that imagines a bordered world, but one "rid of ambiguity and uncertainty" (Amoore 2009, 348). Shopping and relaxing are happy performances of security at the airport indexed by more scripted acts such as removing clothing, raising arms, and spreading legs that make subjects transparent and form a particular regulation of desexualized subjectivity. These airport activities appear as practiced deference to the state, reminding subjects of past and potential tragedy, in

which appropriate nationalist sentimentality enrolls both sexuality and citizenship as important technologies in the continued inauguration of modernist biopolitics (Berlant 1998). Through its promise as a coded and secure space, the airport contributes to nationalist projects in which “people’s everyday lives can be made amenable to intervention and management” (Amoore 2006, 377), but not without forms of diversion and negotiation that combine “dreams with technology” on this “incarceration-vacation” (de Certeau 1984, 113-114). Together, in the home and the airport we thus find the production of code/space implicated in a politics of normative sexuality, through biopolitical regulation but also associated possibilities for “subversion, resistance, and transgression” (Dodge and Kitchin 2004, 207), a dynamic of power central to queer geographies.

### **Queer space?**

This section outlines how queer approaches to space and power have been orientated around the nuances of normative regulation and transgression, useful for approaching code/space. Through a brief overview of the intersections between geographies of sexuality, queer geographies and theory, we illustrate two broad approaches to space in this literature. Space appears first as a medium for an identity politics of already formed (queer) sexualities, and second as a powerfully productive yet potentially chaotic process through which sexual norms are regulated, transgressed, and distributed. Taking the first approach, this broadly makes (homo)sexuality ‘representable’ in space. In some of these geographies of sexuality, this has meant the mapping and decline of ‘gayborhoods’ (often dubiously or otherwise attributed to the proliferation of digital technologies) and charting indices of gay populations (Brown 2014). Space operates here as a bounded territory for similarly contained sexual identities that manifest as points on a canvas to be counted. The spatial and temporal fixity of such mapping thus collides with the epistemologies of queer experiences of “duality, fluidity, and simultaneity” (Brown and Knopp 2008, 42). Nonetheless, representation of ‘deviant’ sexualities has expanded the realm of political action studied by geographers to include struggles over the definitions of sexuality and its relationship to citizenship (Bell 2006; Hubbard 2001; Knopp 1992), together with posing a normative challenge to how geography is done (Binnie 1997; Valentine 1998). However, this focus on space as a way to represent sexual identities is insufficient for a “non-identitarian queer approach” (Oswin 2008, 90) that emphasises the performativity, transgressions, and failures of identity.

The second appearance of space arises from this tension between the identity politics of geographies of sexuality and the post-structural (un)doings of identities associated with queer geographies (Browne 2006). Bell et al.’s (1994) foundational discussion of the queering of space is an attempt to outline a processual understanding that might animate these ambivalent possibilities of a politics of sexuality. Under question is the extent to which Bell et al.’s nebulous process of queering occurs through

a more active understanding of space than that of the map. If putting sexuality on the map produces space as a “realm of stasis” (Massey 1992, 67), an alternative promise of queer space might be to generate “elements of dislocation/freedom/possibility” that enable the politicisation of space-time (p. 79). Such productive spaces are nascent in the post-structural politics called for by Oswin (2008, 90) that extends the utility of queer theory beyond the imaginaries of “concrete space that is carved out by sexual dissidents.” In seeking to connect the performativity of sexuality to space, Bell et al. certainly *aim* to show how space “is constructed [...] actively,” and not “pre-discursively or essentially” (p. 44). However, in deploying the language of original and copy in relation to space, they remain wedded to a logic of identity that tends to reproduce such “normative oppositions” (Browne 2006, 887). In this spatial expression of sexuality the “element of the chaotic” that is “intrinsic to the spatial” (Massey 1992, 84) risks a reduction to a binary of oppression and resistance that neither does justice to the political possibilities of the concepts of queer nor space.

However, we can draw out a little more nuance by considering how acts of ‘normative transgression’ take place through Bell et al.’s (1994) queering of space. Rather than focusing on the fixity of starting point (original) and end-point (deviant/copy) through transgression, we might emphasise the experiences of transgressive movement. Transgression involves disorienting and chaotic space-times that demonstrate how queerness is not always everywhere progressive (Nast 2002). A performance of identity is transgressive such that it involves a breaking or an overstepping, a disidentification through a sense of distance taken “from the scene of my identifications” such that “I am, yet I am not that character” (Butler 2015, 27). So there is a sense of movement between, or at least a shift in aspect towards, positions but the direction of such a journey is relative, it is not in any simple sense straightforward or up-to-date. For example, identities might transgress through forms of “temporal drag,” where bodies perform anachronistic and “stubborn identification with a set of social coordinates that exceed [their] own historical moment” (Freeman 2000, 728). This undoes any spatio-temporal linearity that might be conjured by the transgression of the straight original by the queer copy, as indicated through the complex adaptive functions of mimicry that can produce contrary effects of travesty, camouflage, and intimidation (Lacan 1978, 99).

In paying attention to these vectors and velocities of transgressive movements of and through norms, rather than charting normative coordinates, a sense of space as “ambivalent and porous” (Oswin 2005, 84) emerges through queering. The carnivalesque potential for complicit subversion calls up a queer spatiality “as an undetermined set of processes that simultaneously enables both resistance and capitulation” (*ibid.*). Such heterogeneous space-times open the complex possibilities for and intersections between movement and identity. Passing, transgression, hybridity, and other queer arts of being in-between constitute the dislocations of space that might yet assume more orderly coordinates.



Transgression can itself enable “the stabilisation of relations of power” (Ahmed 1999, 89) as such an event does not automatically “transcend the systematisation of differences into regularities” (p. 91). Such spatio-temporal systematisation or normative distribution of difference fuels the ambivalence of queer theory. The difference of a drive for sameness - “homosexuality” - is treated with indifference, a “hommo-sexuality” (Irigaray, in de Lauretis 1988, 155) in which desire is incorporated into a straight narrative of compulsory happiness in queer existence (Love 2007). The anti-normative function of queer theory is therefore not a linear tactic of direct opposition between ordered coordinates but rather involves attention to how processes of orderliness and chaos occur through norms as ever moving appraisals of the structure of social sets (Wiegman and Wilson 2015). It is such a focus on norms as complex “networks of differentiation” (p. 17) that is picked up next through queer approaches to code/space.

### **Queering code/space**

Here we offer the synthesis of the two claims laid out in the preceding sections by outlining three approaches by which queer thought might aid in theoretical and empirical investigations of code/space. We consider how approaches to regulation by, performativity through, and the dissolution of norms in queer critique might provide frames for spatial productions with code.

### ***Biopolitics and the coding of sexuality***

Early writing often associated with the birth of queer theory focuses on how sexuality as a mode of categorizing, sorting, distributing, and thus knowing individuals has been actively produced (Foucault 1978; Hocquenghem 1978; Sedgwick 1990). Here we consider how this discursive approach to the normative dualisms that produce sexuality as a mode of regulation frame the codings of space emergent in digital and software systems. Forms of dualistic distinction such as public and private, hetero- and homosexual, are examined in such queer scholarship not for their veracity but for how these norms are products of relations of power that are real in their effects. The discourse on sexuality - the regime of statements, silences, institutions, and embodied performances surrounding sex and sexuality - is not only historically produced, but is also actively productive of organized relations of power and forms of subjectivity. Likewise, as in Dodge and Kitchin’s (2004, 205) discussion of Foucault’s “interlocking discourses” resulting from software, the discursive coding of space through digital systems is not a separate reality, but articulates and is articulated through normative regimes of what can be said and done in particular places at specific times. Through this regulation of space, code enacts an “incarnation” in which the norms of “the group’s law” render bodies “identifiable and legible in a social language” (de Certeau 1984, 140).

As the image of “interlocking discourses” suggests though, “making the body tell the code” (*ibid.*) is a variegated operation. Instead of any simple distinction between (coding) oppressor and (coded) oppressed, the binaries of normative dualisms mesh such that the operations and outcomes of their regulatory power can become opaque. Sedgwick (1985) illustrated this through her development of the concept of homosociality that outlines the co-constitution (rather than separation) of sex, gender, and sexuality as systems of oppression (Rubin 1975). She shows how desire, as a modality of power reproducing straight patriarchal society, is unconcerned (or at least not primarily concerned) with hetero/homosexual distinction, and so operates across dualistic binaries. Homosociality describes the accrual of male power between men in which (straight and gay) male desire for other men circulates through a constitutive (and usually feminised) other, but one that is unable to directly participate in the consolidation of that only-male power (Irigaray 1985). Not incidentally, homosociality neatly describes the coalescence of dominant forms of straight masculinity around software and engineering industries and code/spaces at work and at home (Blumen 2012; Massey 1995). Thus ‘homosexual’ codes are simultaneously manifest through ‘heterosexual’ codes, complicating either term’s binary presuppositions. Here desire moves as an “uncodeable difference,” as a weight that falls through and between discursive regimes, or perhaps as a force that “happens beneath technology and disturbs its operations” (de Certeau 1984, 200). By locating erotic relations as excessive of this particular hetero/homosexual discourse, this queer analysis shows how techniques for coding and knowing individuals elicit regulatory mechanisms that extend beyond the coded target.

Perhaps most influential in these elaborations of sexuality as a normalising yet differentiating mode of power has been Foucault’s (2008) work that connects systems of knowledge constructing the discourse of sexuality with technologies designed for the management of populations, targeting the extension (or attrition) of life itself as a new object of governance. For Foucault (1978, 138) ‘technology,’ rather than a description of machines or software-sorted systems, constitutes sets of power-relations, apparatuses, and institutions that carry out “the function of administering life,” and moves between discourse and practice to produce modes of visibility and invisibility. These apparatuses implicate “the visibility and the gridwork” of space to make it “a tool capable of disciplining” any “human group whatsoever,” yet, “are refined and extended without recourse to an ideology” (de Certeau 1984, 46) so that these discursive and non-discursive moves of technological coding through space might occur incrementally and unevenly, without a single centre. This networking that distributes rather concentrates the norm illustrates how digital technologies produce contradictory modes of regulation, inciting both expressive outings and closeted concealments. Code/space intensifies capacities for normative modes of visibility, for example through social media, that in their extension of techniques for observing invite

forms of invisibility, such as through feelings of anxiety, desire, and confusion that might be broadcast but not addressed online.

### ***Cyborg performativity***

According to Haraway (1991, 150), Foucault's biopolitics serve as "a flaccid premonition" of a politics of another kind. This 'cyborg politics' conceives of both organisms and machines as coded devices that are powerfully intimate together in ways "not generated by the history of sexuality" (*ibid.*). This section considers these cyborg entanglements via two steps in queer approaches to normative performance to illustrate the immanence of coding in embodiment. A first step challenges the normative function of code as an automatic act of writing space (Thrift and French 2002, 310). Writing as automatic suggests an operation that occurs by itself and is therefore both controlled - following pre-programmed motions - and yet out of control - action takes place at degrees of removal from humans that risks failure "to reproduce in the way for which it is designed" (Butler 2015, 23). This ambiguous agency of the act is key to Butler's notion of performativity. Performances of sexuality are controlled in that "the act that one does, the act that one performs, is, in a sense, an act that has been going on before one arrived on the scene" (Butler 2004, 160). Butler argues that this pre-programming, the coding, of acts occurs through the citation of norms which, like code, operate "somewhere other than on the linguistic surface, while having the power to influence that surface" (Hayles 2006, 141).

Yet such normative coding of bodily performance contains within it the seeds of its own undoing. The norm shapes the subject "to the extent that it is 'cited' as such a norm, but it also derives its power through the citation that it compels" (Butler, 1993, 13). Rather than a fixed script, these normative codes are to some extent out of control, constantly rewritten through their automatic production. It is in these re-writings of code/space that the transgressive possibilities noted by Bell et al. (1994) might arise, though these are not necessarily anti-normative in an oppositional sense. For example, Turkle's (1997, 210; 2011, 194) discussion of the enchanting possibilities of becoming avatar, of having the choice to be "virtual man" or "virtual woman," is tempered by her later exploration of presentation anxiety and the question of whether "what happens on Facebook, stays on..." her uncertain elliptical indicating that the (disembodied) subject - through the data 'excessive' of them - partially remains and repeats their performances online after logging off, potentially without conscious consent or knowledge. These unpredictable drags of online performances that might be backwards-looking as much as progressive illustrate "the 'net-like organisation' (Foucault 1980, 98) of the norm" (Giffney 2004, 75). Such performances might thus be read as a challenge not to normative singularity but rather through normative distribution: "Facebook's expansive list of fifty-something gender designations is not a contestation of a norm; it is simply one more wrinkle in the fabric of gender normativity" (Weigman and Wilson 2015, 16).

A second step builds on these instabilities of the norm to consider how bodies and machines perform code/space together. The possibility that machines might animate the human challenges divisions between “the organic and the artificial” (Stacey and Suchman 2012, 5). These cyborg tendencies through which “the machine is us” (Haraway 1991, 180) are immanent in queer approaches that open up sexuality to questions of intentionality, failure, and the “sort of styles” that “signal the crisis of survival” (Butler 2000, 36). Queer theory illustrates how the reduction of sexuality to a natural, reproductive relation is insufficient. Sexuality illustrates how ‘natural’ desire involves forms of mechanistic or instrumental force, that rather than targeting reproduction are orientated towards the pleasure principle and even the death drive (Edelman 2004). Thus there is a “ubiquity and invisibility” (Haraway 1991, 153) to the coming together of human and machine, one that might result in decreased physical contact and geographical proximity between people as attention is directed towards self-performance on and offline through technologies. This individualism is intensified through wearable technologies of the ‘quantified self’ that generate data spanning the day and night. This counting across public and private might erase their separation, producing a spatial typology through the rhythms of personal biological fluctuations of steps, heartbeat, and calorie intake (Moore and Robinson 2015). The mechanical drive for bodily satisfaction, the “close ties of sexuality and instrumentality” (Haraway 1991, 168), is extended as the desires, demands and withdrawals of embodied performance are orientated with and through machines. Together, these queer readings of cyborg performance illustrate that the apparently normative scriptings of code interact with the existing mechanical nature of embodiment, opening up scope for inquiry into the relationships between spatial regulation and expression of bodies and technologies.

### ***Technology and anti-social space-time***

Contemporary queer theory has taken an ‘anti-social turn,’ that questions the modes through which (hetero-)normative social relations are reproduced, to advocate for a politics of failure or disorientation that constitutes a disengagement from, and dissolution of, the status quo (Ahmed 2006; Halberstam 2011). Here we suggest that code/space is experienced through such ambivalent senses of living a queer social life. These ambivalences may be felt, for example, through the porous lines drawn between online and offline performances in which happy feelings interface with senses of shame, negativity, and other ‘difficult’ emotions. From a reading of Ahmed’s (2010) figure of the unhappy queer, we might find the anxieties and pressures to display the good life through social media as resulting from a problematic alignment of social expectations of happiness with moralizing constructions of transparency online. In highlighting the contingent happening of happiness, Ahmed draws on an archive of emotional alienation and deviation through which queer subjectivity is produced. Such a collection of fragmentary emotions is scattered through code/space, discernible amidst sites of solidarity like multimedia online (Jenzen,

forthcoming), and sexual experimentation such as pornography and location-based hook-up apps. These sites circulate complex emotions that include but disorientate feelings of happiness. Happiness takes a diversionary path, emerging perhaps through the sharing of unhappiness in discussions of queer and transgendered experiences, or via the opportunistic same-sex encounter that may not necessarily provide a challenge to individual straight identity. These diversions of happiness are one trace of the dissolution of the encounter taking place through code/space, a future archive of emotional fragments where “spectators witness and appreciate the waning of their genres of attachment [...] without knowing what comes next” (Berlant and Edelman 2014, 27).

By emphasising these complex archives of feeling, happiness in the social life of code has no single moral route map. Ahmed’s understanding does not do away with happiness but opens out its happening to the frictions, perversities, and perturbations of queer life. Such disengagement with the promise of happiness, or with codings intended to assure and regulate future feelings, is also found in Edelman’s (2004) and Love’s (2007) queer temporalities. Through a critique of the figure of the Child, Edelman suggests that modern temporalities are structured around a sense of progress tied to a (technological) drive towards a (straight) reproductive future that is threatened by queerness. These temporalities are not necessarily separate from queer life, but incorporate and appropriate historical figures (whose sexuality is ambiguous and ambivalent rather than ‘queer’ in the contemporary sense) through a liberal representational politics of inclusion, tolerance, and acquiescence to identity categorization (Love 2007). Here we might point to the example of Alan Turing, whose biography in recent popular press and sentimentalist cinema has been simplified and straightened through a reimagining of persecution inaugurated into a heroic war-time nationalist discourse that simultaneously shores up the relationships between a domesticated, straightforward (though not necessarily straight), identity-based sexuality and technological progress. Through Edelman’s and Love’s queer temporalities, we might attempt to read code/space as not necessarily characterized by this common appropriation of singular and straight futures that irretrievably subordinates present spatiotemporality. The sharing of aspirations, wants, and ‘likes’ on social media is not necessarily to feel alike (Ahmed 2010), but leaves room open for circumstances of discontentment, failure, and challenge to the status quo through intentional online interaction or the use of platforms that refuse the straightforward accrual and definition of subjects (and their data) by the procurement of only identity-based profiles.

Thus, the anti-social queer remains invested in and attached to projects of collective world-making (Berlant 2011), but these occur ambivalently. This is a subject that is constituted by forms of “stillness, stuckness, and aggressive willfulness” that are simultaneously “non-sovereign” (Berlant and Edelman 2014, 27), and find that the promises of intimacy through technology fail to lead “to a stabilising something, something institutional” (Berlant 1998, 287). There is then something cruel about the

normativity, the seemingly unavoidable nature, of attachment to social life, to the promising promiscuities of infinite digital encounters through code/space. Yet, sticking with Berlant and Edelman (2014, 5), we find the focus is less on the ‘anti-social’ as an interrogation of the meaning of negativity, and more on the possibilities of the “socially awkward,” such that code/space becomes a “muddled middle” constituted through (dis)connections and (dis)orientations that “engender social forms that transform the habitation of negativity’s multiplicity.” Rather than determining the forms and rhythms of intimacy through code/space, this less cruelly optimistic attachment of “getting in synch with being out of synch” (*ibid.* p. 22) opens up the question of what it means to be (anti-)social with digital media.

## **Conclusion**

Bringing queer theory to bear on code/space illustrates the regulative and proliferative intersections between technology and sexuality. Queer theory indicates the role of difference and processes of differentiation in socio-spatial life with technologies. By emphasising the normative functioning of sexuality as a ‘technology,’ we have shown how software is only one form of coding that might regulate space. Such coding is not undifferentiated but has disproportionate effects on those furthest distributed from the ‘norm.’ As well as bringing this understanding of sexuality as technology to code/space, queer theory illustrates how these technologies of sexuality are neither singular nor straightforwardly productive. By emphasising the distribution and disruption of sexual norms, we have pointed to how software codings and the technical objects through which they are written, can result in failures to (re)produce, or to produce differently, forms of social life.

‘Queering code/space’ raises at least two epistemological questions for approaching the intersections between technology and sexuality. The first surrounds where to look for accounts of difference and differentiation in social life with technologies. On the one hand, we might focus on abstractions, examining aggregations and distributions of activity through data, whilst on the other, the emphasis might be on practices, exploring the ways individuals live differently together with technical devices. This is a question of how to address the objectifying tendencies of technology, with the ways that they produce subjectivities. The second concerns how to construct accounts of social agency produced with technology. This is a problem in part of how technologies might code and direct action, as in Butler’s account of performativity, but also of how agency is distributed across bodies and technologies such that direct causality becomes opaque.

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